

# Package ‘ISM’

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**Type** Package

**Title** Interpretive Structural Modelling (ISM)

**Version** 0.1.0

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**Description** The development of ISM was made by Warfield in 1974.

ISM is the process of collaborating distinct or related essentials into a simplified and an organized format. Hence, ISM is a methodology that seeks the interrelationships among the various elements considered and endows with a hierarchical and multilevel structure.

To run this package user needs to provide a matrix (VAXO) converted into 0's and 1's.

Warfield,J.N. (1974) <doi:10.1109/TSMC.1974.5408524>

Warfield,J.N. (1974, E-ISSN:2168-2909).

**License** GPL-3

**Encoding** UTF-8

**Depends** xlsx,rJava,xlsxjars

**LazyData** true

**RoxygenNote** 6.0.1

**NeedsCompilation** no

**Repository** CRAN

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ISM

*Interpretive Structural Modeling (ISM).*

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### **Description**

This methods provides a wellformatted solution of ISM

### **Usage**

ISM(fname, Dir)

### **Arguments**

fname            a matrix consists of 1s' and 0's (initial reachability matrix)  
Dir              a path where user wants to save output files

### **Details**

This Function Provides well-formatted and readable excel output files (Final Reachability Matrix and Level Partition of each iteration) that make interpretation easier.

### **Value**

provides two output files (Final Reachability Matrix and Level Partition of each iteration) in Excel format

### **Author(s)**

Adarsh Anand, Gunjan Bansal

### **References**

Adarsh Anand, Gunjan Bansal, (2017) "Interpretive structural modelling for attributes of software quality", Journal of Advances in Management Research, Vol. 14 Issue: 3, pp.256-269, <https://doi.org/10.1108/JAMR-11-2016-0097>

### **Examples**

```
ISM(fname=matrix(c(1,1,1,1,1,0,1,1,1,1,0,0,1,0,0,0,1,1,1,1,0,1,1,0,1),5,5,byrow=TRUE),Dir=tempdir())
```

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Mat_format	<i>This Mat_format Function formats the ISM_Matrix.xlsx file That is implicitly called by ISM.</i>
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**Description**

This Mat\_format Function formats the ISM\_Matrix.xlsx file That is implicitly called by ISM.

**Usage**

```
Mat_format(fin_mat, A_mat, file2)
```

**Arguments**

fin_mat	a final matrix consists of 1s' and 0's (final reachability matrix) produced by ISM
A_mat	a initial matrix consists of 1s' and 0's (initial reachability matrix) produced by ISM
file2	a final matrix consists of 1s' and 0's (final reachability matrix) produced by ISM

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outputformat	<i>This outputformat Function formats the ISM_output.xlsx file that implicitly called by ISM.</i>
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**Description**

This outputformat Function formats the ISM\_output.xlsx file that implicitly called by ISM.

**Usage**

```
outputformat(file1)
```

**Arguments**

file1	a Level out iterations produced by ISM
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